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CYMOPTERIS (APIACEAE) IN TRANS-PECOS, TEXAS

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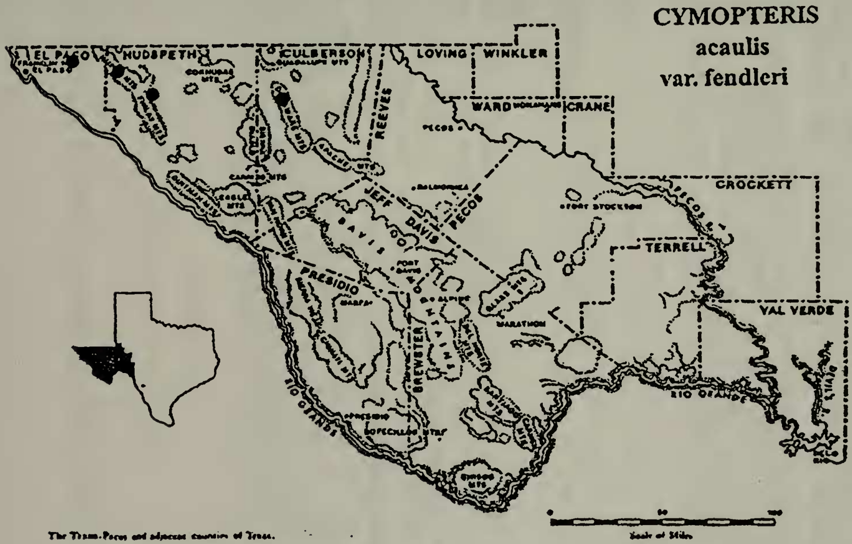
ABSTRACT

New names and/or combinations are provided for the following apioids of trans-Pecos, Texas: ***Cymopteris filifolius*** (Mathias *et al.*) B.L. Turner, *comb. nov.* (= *Aletes filifolius* Mathias *et al.*), ***Cymopteris hallii*** (A. Gray) B.L. Turner, *comb. nov.* [= *Aletes acaulis* (Torrey) Coulter & Rose - not *Cymopteris acaulis* (Pursh) Raf.], ***Cymopteris longiradiatus*** (Mathias *et al.*) B.L. Turner, *comb. nov.* (= *Pseudocymopteris longiradiatus* Mathias *et al.*). These several species, along with *Cymopteris acaulis* and *C. lemmonii*, constitute the five taxa recognized for Trans-Pecos, Texas. Comments regarding their taxonomy, along with maps showing their distributions, are provided.

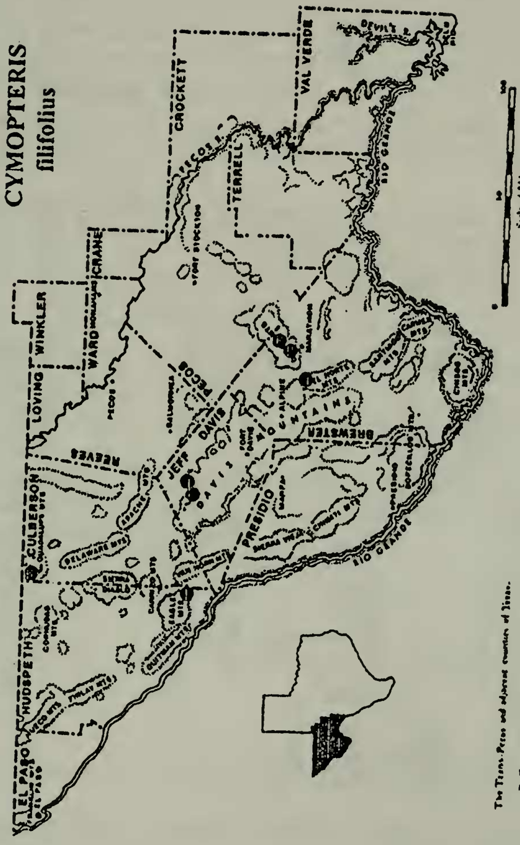
KEY WORDS: *Cymopteris*, Apiaceae, Texas

Generic groupings in the Apiaceae are notoriously volatile, their lines variously drawn on technical characters of the flowers or fruits, most often upon the latter, but sometimes upon such technical features as stem pubescense (e.g., *Cymopteris* vs. *Pseudocymopteris*, cf. Cronquist 1997). That generic lines in the Apiaceae are still in a state of considerable flux can be inferred from the recent DNA studies of the subfamily Apioideae (Katze-Downie *et al.* 1999). The latter workers note that DNA data provide little support for Drude's classical morphological classification of the subfamily nor for alternative classificatory systems using yet other data. In short, Katze-Downie *et al.* state that "the homoplastic nature of many of these nonmolecular characters" has led to much confusion and differences in taxonomic treatments. Hopefully, additional DNA studies will lead to a more stable generic classification of the Apiaceae.



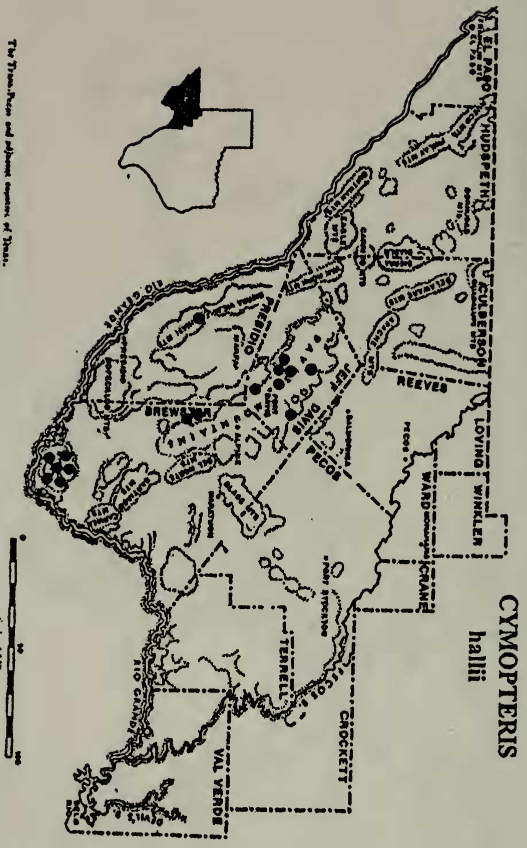
The Trans-Pecos and adjacent counties of Texas.

Map 1. Distribution of C. acaulis var. fendleri



The Trans-Pecos and adjacent counties of Texas.

Map 2. Distribution of C. filifolius



The Trans-Pecos and adjacent counties of Texas.

Map 3. Distribution of C. hallii

With this as an introduction to the name changes concerned, I plunge into unfamiliar taxonomic territory. Fortunately, the name changes proposed in the above abstract largely parallel those of Cronquist (1997) in his treatment of the Apiaceae for the *Intermountain Flora*, although I came to my conclusions without knowledge of his perceptive treatment. Cronquist has presented a compelling case for the inclusion of *Pseudocymopteris* into an enlarged genus *Cymopteris*. In addition, he treated the genus *Aletes* (Mathias *et al.* 1964) within his concept of *Musineon*. I would go further and include all of these into an enlarged *Cymopteris*, the distinction between the latter and *Musineon* being arbitrary at best. Indeed, Constance (1993), the doyen of North American apioids, wryly commented after his generic description of *Cymopteris* that "Generic boundaries [are] fluctuating [in the group]."

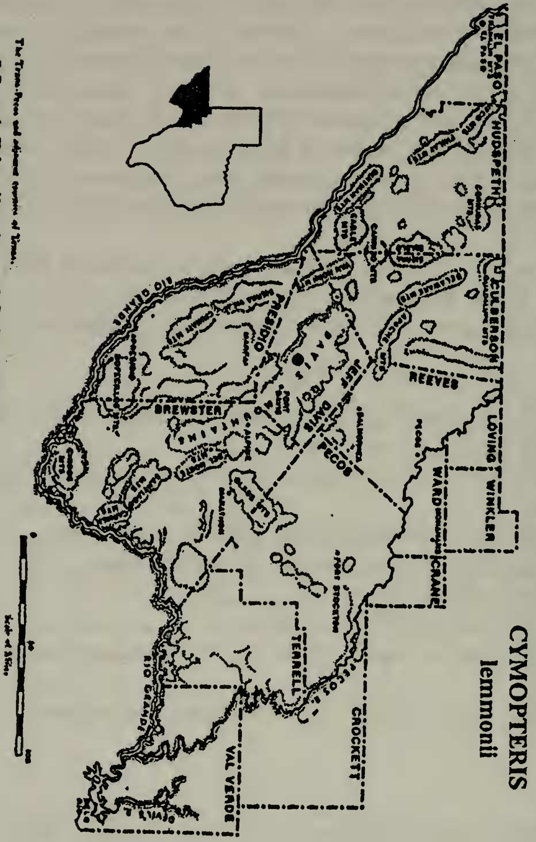
The montane regions of Trans-Pecos, as indicated in the above, are currently known to house five species of *Cymopteris*. A key to these follows, along with appropriate comments and maps showing their distribution in the region concerned.

1. Ribs of fruits not winged at maturity, the loments more or less terete or rounded in cross-section, not at all flattened. .... *C. hallii*
1. Ribs of fruits not winged at maturity, the loments more or less flattened in cross-section. .... (2)
  2. Segments of leaves filiform, terete in cross-section. .... *C. filifolius*
  2. Segments of leaves flattened, not at all terete. .... (3)
3. Umbels decidedly involucrate. .... *C. acaulis*
3. Umbels scarcely, if at all, involucrate. .... (4)
  4. Petals yellow; upper slopes of Mt. Livermore, Davis Mountains, Jeff Davis Co. .... *C. lemmonii*
  4. Petals white, creamy white, to purplish; widespread. .... *C. longiradiatus*

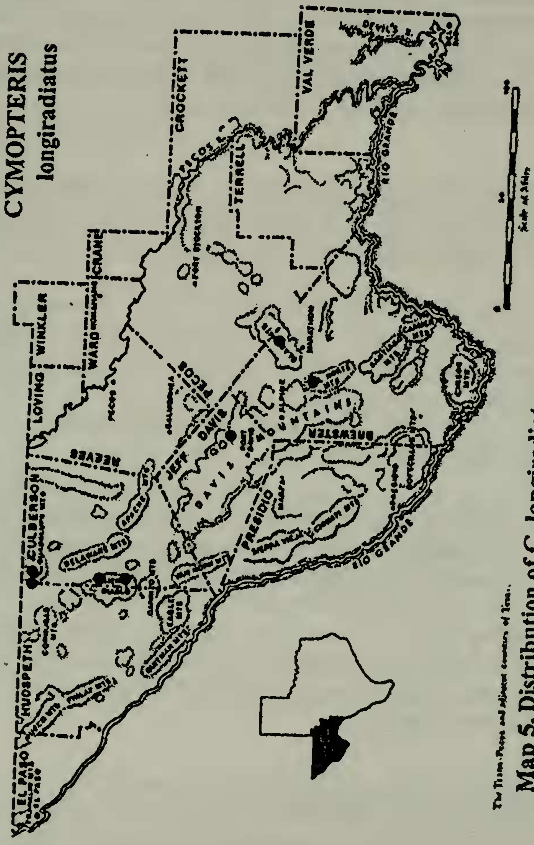
Cymopteris acaulis (Pursh) Raf., *Herb. Raf.* 40. 1833. Map 1.

Cronquist (1997) provided a complete synonymy for this species, noting that three infraspecific taxa are recognized; Trans-Pecos material belongs to the var. *fendleri* (A. Gray) Goodrich.

Cymopteris filifolius (Mathias, Constance & Theobald) B.L. Turner, *comb. nov.* Map 2. BASIONYM: *Aletes filifolius* Mathias, Constance & Theobald, Madroño 20:214. 1969.



Map 4. Distribution of C. lemmonii



The Trans-Pecos and adjacent counties of Texas.

Map 5. Distribution of C. longiradiatus

This is a very distinct species, although Mathias & Constance (1951) positioned elements of the taxon within their concept *Pseudocymopteris montanus* (A. Gray) Coulter & Rose. Such elements were subsequently (Mathias, Constance & Theobald 1969) elevated to specific rank as *Aletes filifolius* Mathias, Constance & Theobald, although Theobald, Tsenz & Mathias (1963) failed to account for the taxon in their revisionary treatment of *Aletes*. As indicated in my above introductory remarks, I accept Cronquist's submergence of *Aletes* into *Musineon*, but would go further and include the latter into yet a further expanded *Cymopteris*. At least I can find no compelling features that readily distinguish *Aletes* from *Musineon*, nor either of these from the originally positioned *Cymopteris filifolius*.

Cymopteris hallii (A. Gray) B.L. Turner, ***comb. nov.*** Map 3. BASIONYM: *Seseli hallii* A. Gray, Proc. Amer. Acad. Arts 8:288. 1870. *Carum hallii* (A. Gray) S. Wats., *Bibl. Ind.* 416. 1878. *Zizia hallii* (A. Gray) Coulter & Rose, Bot. Gaz. 12:137. 1887.

Deweya acaulis Torrey, *Pacif. R.R. Rep.* 4:94. 1857. *Oreosciadium acaule* (Torrey) A. Gray, Proc. Amer. Acad. Arts 7:343. 1868. *Aletes acaulis* (Torrey) Coulter & Rose, *Rev. N. Amer. Umbell.* 126. 1888. not *Cymopteris acaulis* (Pursh) Raf.

Musineon greenei A. Gray, Proc. Amer. Acad. Arts 8:387. 1873.

Aletes obovata Rydb., Bull. Torrey Bot. Club 31:573. 1904.

Cronquist (1997, p. 372), as noted in the above, would position this, the type species of *Aletes*, into the genus *Musineon*, although he did not make the name changes necessary to formalize this repositioning. Personally, I can find little to distinguish between *Aletes* and *Musineon*, nor could Cronquist (199, p. 370), to judge from his remarks regarding their distinctiveness, hence my submergence of *Aletes acaulis* (Torrey) coulter & Rose into *Cymopteris*. There being an earlier *C. acaulis*, I have had to take up the next available name, *C. hallii*, first proposed in 1870 by A. Gray as a member of the genus *Seseli*.

Cymopteris lemmonii (Coulter & Rose) Dorn, *Rev. N. Amer. Umbell.* 174. 1888. Map 4.

Cronquist (1997) gave a rather lengthy account of this species including a complete synonymy. The taxon was positioned in *Pseudocymopteris* by Mathias & Constance (1965), as *P. montanus*, but I follow Cronquist in placing all of *Pseudocymopteris* (sensu Mathis & Constance) into an expanded *Cymopteris*. So positioned, *P. montanus* takes the name *Cymopteris lemmonii*, there being an earlier *C. montanus*. In the Trans-Pecos area of Texas, *C. lemmonii* is confined to the upper slopes of the second highest peak in the state (Mt. Livermore, ca. 8200 ft.).

Cymopteris longiradiatus (Mathias, Constance & Theobald) B.L. Turner, *comb. nov.* Map 5. BASIONYM: *Pseudocymopteris longiradiatus* Mathias, Constance & Theobald, Madroño 20:217. 1965.

In their treatment of the Apiaceae of Texas Mathias & Constance (1951) positioned material of this species in their broad concept of *Pseudocymopteris montanus*; the plants concerned were subsequently recognized as belonging to a distinct species, *P. longiradiatus* Mathias, Constance & Theobald. Like Cronquist, I include *Pseudocymopteris* in an enlarged *Cymopteris*, hence the present combination. So far as known, *C. longiradiatus* is confined to Trans-Pecos, Texas and southeasternmost New Mexico.

Finally, it should be noted that both Cronquist (1997) and Welsh *et al.* (1987) accredit *Cymopteris multinervatus* (Coulter & Rose) Tidestrom as occurring in Trans-Pecos, Texas, but I take these reports to be misidentifications of *C. acaulis* var. *fendleri*, the two taxa being superficially very similar.

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